

Trinity Enhance



CEDAR Audio Limited
www.cedaraudio.com

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Getting Started

Derived from the CEDAR Trinity surveillance system and designed specifically for audio forensic use, Trinity Enhance provides four related tools that allow you to suppress background noise and increase the intelligibility of speech. It also allows you to enhance the background if that contains wanted detail. Its user interface has been designed to operate with the minimum of parameters so that users can obtain first-class results in the quickest possible time.

Trinity Enhance conforms to the 64-bit AAX Native, 64-bit VST 2.4 and VST 3, and AU plug-in formats. It is not compatible with 32-bit operating systems or hosts.

Unpacking

Mac:

When Trinity Enhance is supplied for Mac hosts using an iLok, no physical objects are necessary or supplied.

PC:

When Trinity Enhance is supplied to run a PC host, this package should contain the following:

- A memory stick containing the installer for Trinity Enhance
- The CEDAR HSP dongle and a licence number fob that you can attach to it

Assumed Knowledge

This manual assumes that you are fully conversant with your Mac or PC system(s), and that you know how to operate the host software onto which you're loading Trinity Enhance. It will refer to operations that are common to these products, but will not attempt to explain them.

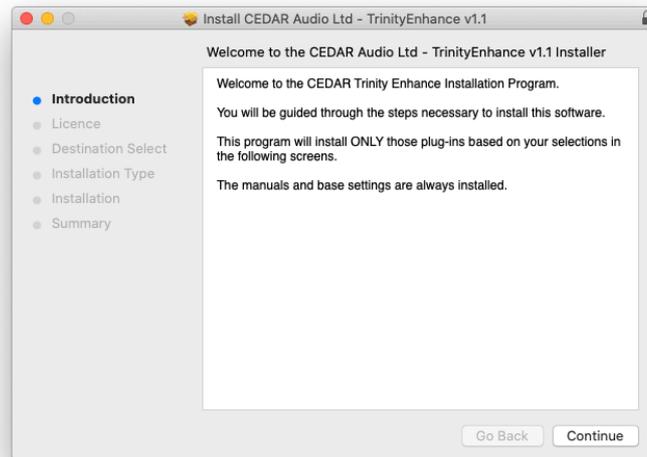
Troubleshooting Non-CEDAR Components

If you encounter problems with your Macintosh®, macOS®, Mac OS X®, your PC, Microsoft Windows® or any 3rd party host system, please refer to their support materials or contact the dealer that supplied these to you. Unless appointed independently as authorised dealers for the following products, CEDAR Audio's dealers will not attempt to provide technical support for:

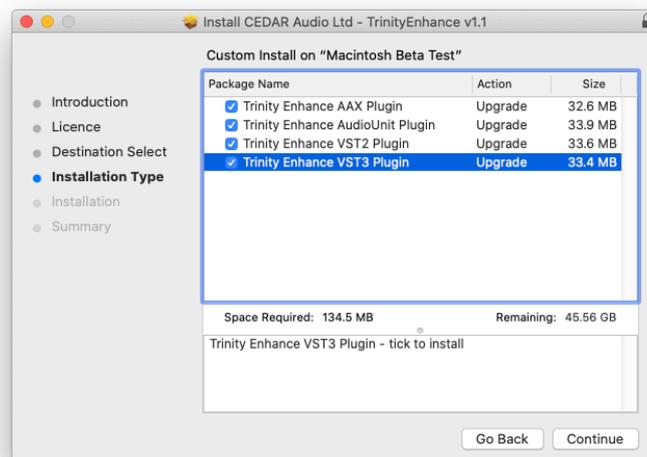
- Macintosh computers
- macOS and Mac OS X
- PCs of any description
- Microsoft Windows
- 3rd party host hardware
- 3rd party host software

Installing Trinity Enhance – Mac/iLok

- Before proceeding, ensure that any older versions of the plug-in (if any) are archived and removed from the plug-in folder.
- Double-click on the installer package:
CEDARAudioLtd-TrinityEnhance1.1.pkg
- Follow the instructions offered by the installer.



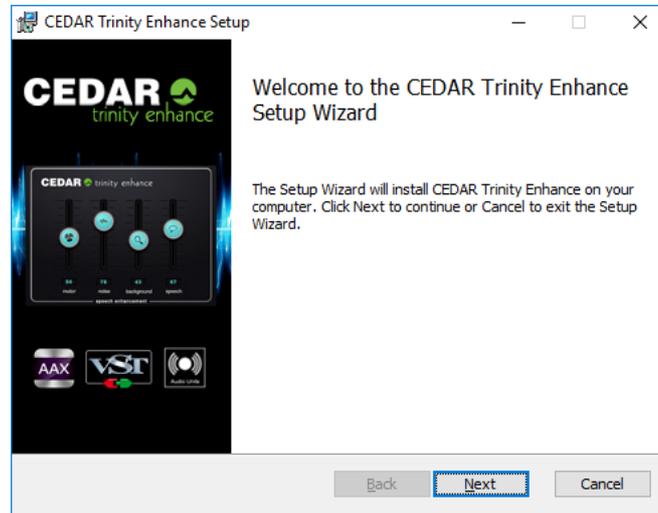
- Ensure that you have sufficient space on your drive and then press Install to install the complete package or press the Customise button to select which format and/or selection of modules are loaded.



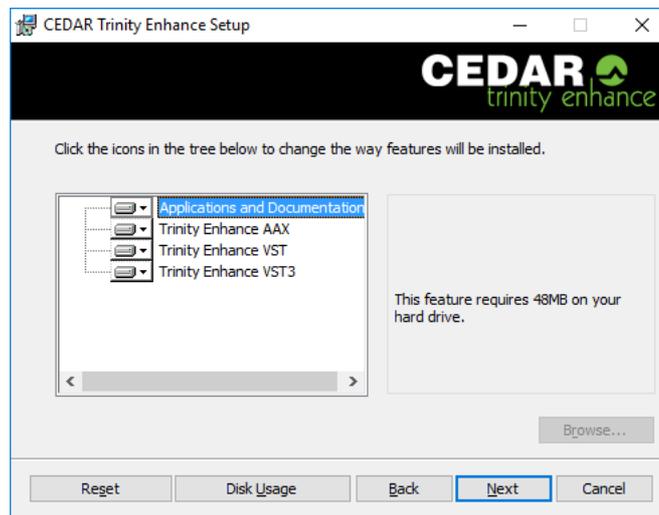
- A message will appear to tell you that installation was completed successfully.

Installing Trinity Enhance – PC/HSP

- If necessary, uninstall any previous version of Trinity Enhance.
- Double-click on the installer package: **setup.exe**



- Follow the instructions offered by the installer.
- If you are asked whether you would like to update the HSP drivers, you should tick the Install Driver box to ensure that you have the latest version installed.
- Ensure that you have sufficient space on your drive and then select the processes you wish to install in the required plug-in format(s).



- A message will appear to tell you that installation and, if selected, the driver update was completed successfully. Click on OK and Finish.
- Insert the CEDAR HSP dongle into any available USB socket.

Licence Manager - PC/HSP only

In addition to installing Trinity Enhance for the first time, this section of the manual is relevant if you are upgrading from a previous version of Trinity Enhance, or if you are installing a full version over a previous, timed version.

Mac

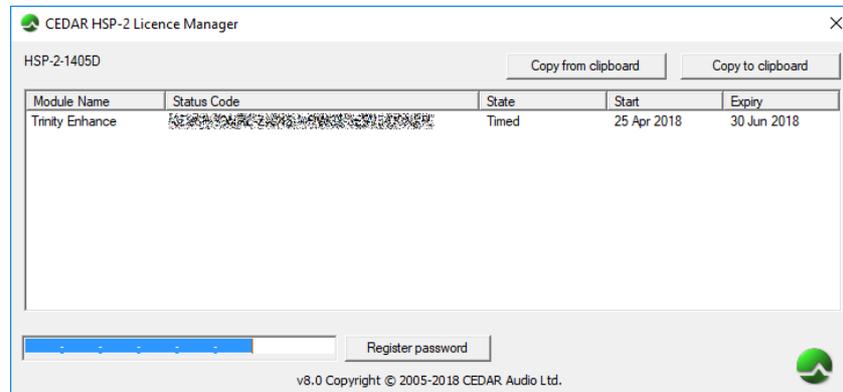
Licensing of Trinity Enhance is achieved using the iLok licence manager. Please refer to your iLok documentation.

PC

Ensure that the dongle is inserted and invoke the Licence Manager from the Windows menu.

If you are using a dongle that has been supplied for use with earlier versions of CEDAR software, the firmware upgrade window may appear. Click on Yes to upgrade the dongle's firmware to support the latest software.

When the firmware upgrade is complete (or if it has not been necessary) the Licence Manager will appear. This shows the CEDAR software that is currently installed on the host system.



To install a licence that connects new software to the existing dongle, type the password supplied by CEDAR Audio into the **Register password** window. (You may also **Copy from clipboard** if appropriate.) When accepted, the password will change from red to black. Press the **Register password** button to complete the registration. The new software is now ready for use.

There may be occasions when CEDAR Audio requires your Status Codes. If so, use the **Copy to clipboard** button to copy and paste this information into an email or other suitable document.

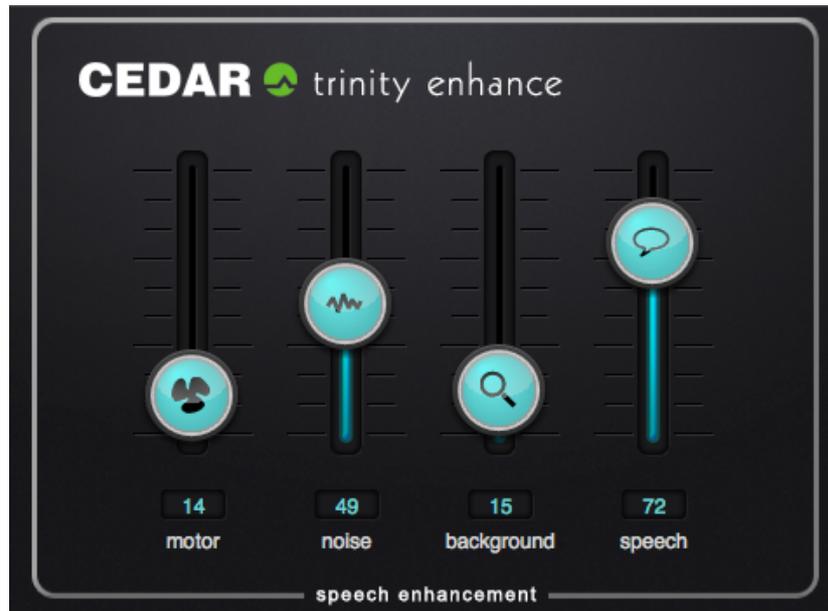
Licence states - PC only

Click on the  icon within Trinity Enhance’s user interface to access the Licence Manager.

This icon has three states:

Image in GUI	Status
	The software is fully licensed.
	A time-out demo licence has been issued.
	<p>There are six reasons why you might see the red icon. Hovering over the icon will display a tool tip that offers further information as follows:</p> <ol style="list-style-type: none">1. No licence has been issued.2. A timed licence has expired.3. A timed licence has been disabled because of a problem. This should not affect full licences. <i>If you encounter this message, check that the system clock is set to the correct date and time. If it is not, correct it. If the clock is correct, it's possible that the dongle has failed and should be returned to CEDAR Audio if you wish to use timed (demo or rental) licences.</i>4. DSP not loaded. You should relaunch the host system with the CEDAR dongle attached. If this does not cure the problem, you should reinstall Trinity Enhance.5. The HASP dongle has become physically detached after loading the host software and Trinity Enhance.6. Some software hosts do not update the status until the process is run in each session. Once run, the amber or green icon will appear, as appropriate.

Operation



There are four processes:

Motor

Removes steady noises such as engine rumble, mains hum, air conditioners, and fans, but may make the resulting sound a little hissy. When applicable, increase the amount of processing until a satisfactory amount of noise suppression is achieved without making the wanted speech sound too thin.

Noise

High levels of broadband noise can cause listener fatigue. The noise reduction process is therefore very useful, especially since it will also counteract any hiss introduced by the motor process. When applicable, increase the amount of noise removal up to the point when speech begins to sound less intelligible and, if necessary, reduce the amount of processing during difficult periods of audio.

Background

Makes background sounds appear louder relative to the foreground. This is useful if someone who is near the microphone is talking to someone who is further away. Increasing the background value will also increase the overall level of the audio, so adjust the final output level downward if necessary. This will be particularly important if you are monitoring at high levels on headphones.

Speech

Enhances speech signals relative to other types of sound. When applicable, increase the amount of speech enhancement to help reveal the voices. If the sound starts to become harsh, loud or boxy, reduce the value a little.

Tutorial

Set all the sliders to zero.

Now listen to the noisy audio. If there is a pronounced continuous component to the noise, raise the **motor** slider until this is suppressed to the desired degree or eliminated. If the voice becomes too thin, reduce the value of this parameter a little.

If there is broadband noise or hiss still present, raise the **noise** slider until this is suppressed to the desired degree or eliminated.

Next, decide whether you wish to enhance the background, which may contain quiet speech of interest. Raise the **background** slider to increase the loudness of low-level signals.

If the speech is still unclear, you can further enhance it by raising the **speech** slider by an appropriate amount.

In most cases, you should attempt to find the minimum value of each parameter that achieves optimum intelligibility. Over-processing will often lead to sub-standard results. Experiment to find the optimum combination of the four parameter values.

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Contact Information and Support

Headquarters

Address:	CEDAR Audio Ltd, 20 Home End, Fulbourn, Cambridge, CB21 5BS, UK
Telephone and Fax:	T: +44 1223 881771 F: +44 1223 881778
Email:	support@cedaraudio.com

USA Office

Address:	CEDAR Audio USA, 82 Gilman Street, Portland, ME 04102, USA
Telephone and Fax:	T: +1 207 828 0024 F: +1 207 773 2422
Email:	cedarusa@cedaraudio.com

German Office

Address:	CEDAR Deutschland, Görlitzer Str 3, D-49525 Lengerich, Deutschland
Telephone and Fax:	T: +49 5481 945087 F: +49 5481 945088
Email:	info@cedaraudio.de

Web

English language:	www.cedaraudio.com
German language:	www.cedaraudio.de

Worldwide Dealer List

For an up-to-date dealer list, please visit www.cedaraudio.com.

Technical Support

Should you experience difficulties with Trinity Enhance, please contact your local dealer or CEDAR office. Alternatively, you may send an email to **support@cedaraudio.com**. In either case, please provide the following details:

- Your dongle serial number or username, and your software version number.
- Details of the host system and version numbers.
- A precise description of the problem.

Licence and Limited Warranty

1. DEFINITIONS

In this Licence and Limited Warranty the following words and phrases shall bear the following meanings:

'the Company' is CEDAR Audio Limited of 20 Home End, Fulbourn, Cambridge, CB21 5BS, UK;

'the System' means any instance of CEDAR Trinity Enhance;

'this Document' means this Licence and Limited Warranty.

2. ISSUE AND USE OF THE SYSTEM

2.1 The terms and conditions of this Document are implicitly accepted by any person or body corporate who shall at any time use or have access to the System, and are effective from the date of supply of the System by CEDAR Audio Limited to its immediate customer.

2.2 The Company hereby grants to the Licensee and the Licensee agrees to accept a non-exclusive right to use the System.

3. PROPERTY AND CONFIDENTIALITY

3.1 The System contains confidential information of the Company and all copyright, trade marks, trade names, styles and logos and other intellectual property rights in the System including all documentation and manuals relating thereto are the exclusive property of the Company. The Licensee acknowledges that all such rights are the property of the Company and shall not question or dispute the ownership of any such rights nor use or adopt any trading name or style similar to that of the Company.

3.2 The Licensee shall not attempt to reverse engineer, modify, copy, merge or transcribe the whole or any part of the System or any information or documentation relating thereto.

3.3 The Licensee shall take all reasonable steps to protect the confidential information and intellectual property rights of the Company.

4. LIMITED WARRANTY AND POST-WARRANTY OBLIGATIONS

4.1 The Company warrants that the System will perform substantially in accordance with the appropriate section of its accompanying product manual for a period of one year from the date of supply to the Company's immediate customers.

4.2 The Company will make good at its own expenses by repair or replacement any defect or failure that develops in the System within one year of supply to the Company's immediate customer.

4.3 The Company shall have no liability to remedy any defect, failure, error or malfunction that arises as a result of any improper use, operation or neglect of the System, or any attempt to repair or modify the System by any person other than the Company or a person appointed with the Company's prior written consent.

4.4 In the case of any defect or failure in the System occurring more than twelve months after its supply to the Company's immediate customer the Company will at its option and for a reasonable fee make good such defect or failure by repair or replacement (at the option of the Company) subject to the faulty equipment having first been returned to the Company. The Company will use reasonable efforts to return repaired or replacement items promptly, all shipping, handling and insurance costs being for the account of the Licensee.

4.5 The above undertakings 4.1 to 4.4 are accepted by the Licensee in lieu of any other legal remedy in respect of any defect or failure occurring during the said period and of any other obligations or warranties expressed or implied including but not limited to the implied warranties of saleability and fitness for a specific purpose.

4.6 The Licensee hereby acknowledges and accepts that nothing in this Document shall impose upon the Company any obligation to repair or replace any item after a time when it is no longer produced or offered for supply by the Company or which the Company certifies has been superseded by a later version or has become obsolete.

5. FORCE MAJEURE

The Company shall not be liable for any breach of its obligations hereunder resulting from causes beyond its reasonable control including, but not limited to, fires, strikes (of its own or other employees), insurrection or riots, embargoes, container shortages, wrecks or delays in transportation, inability to obtain supplies and raw materials, or requirements or regulations of any civil or military authority.

6. WAIVER

The waiver by either party of a breach of the provisions hereof by the other shall not be construed as a waiver of any succeeding breach of the same or other provisions, nor shall any delay or omission on the part of either party to exercise any right that it may have under this Licence operate as a waiver of any breach or default by the other party.

7. NOTICES

Any notices or instruction to be given hereunder shall be delivered or sent by first-class post or telecopier to the other party, and shall be deemed to have been served (if delivered) at the time of delivery or (if sent by post) upon the expiration of seven days after posting or (if sent by telecopier) upon the expiration of twelve hours after transmission.

8. ASSIGNMENT AND SUB-LICENSING

The Licensee may at his discretion assign the System and in doing so shall assign this Licence its rights and obligations to the purchaser who shall without reservation agree to be bound by this Licence. The original Licensee and any subsequent Licensees shall be bound by the obligations of this Licence in perpetuity.

9. LIMITATION OF LIABILITY

The Company's maximum liability under any claim including any claim in respect of infringement of the intellectual property rights of any third party shall be, at the option of the Company either:

- (a) return of a sum calculated as the price received for the System by the Company from its immediate customer depreciated on a straight line basis over a one year write-off period; or
- (b) repair or replacement of those components of the System that do not meet the warranties contained within this Document.

The foregoing states the entire liability of the Company to the Licensee.

10. CONSEQUENTIAL LOSS

Even if the Company has been advised of the possibility of such damages, and notwithstanding anything else contained herein the Company shall under no event be liable to the Licensee or to any other persons for loss of profits or contracts or damage (whether direct or consequential) arising in connection with the System or any modification, variation or enhancement thereof and including any documentation or data provided by the Company or for any other indirect or consequential loss.

11. ENTIRE AGREEMENT

The Company shall not be liable to the Licensee for any loss arising in connection with any representations, agreements, statements or undertakings made prior to the date of supply of the System to the Licensee.

12. TERMINATION

This Licence may be terminated forthwith by the Company if the Licensee commits any material breach of any terms of this Licence. Forthwith upon such termination the Company shall have immediate right of access to the System for the purpose of removing it.

13. SEVERABILITY

Notwithstanding that the whole or any part of any provision of this Document may prove to be illegal or unenforceable the other provisions of this Document and the remainder of the provision in question shall remain in full force and effect.

14. HEADINGS

The headings to the Clauses are for ease of reference only and shall not affect the interpretation or construction of this Document.

15. LAW

This Document shall be governed by and construed in accordance with English law and all disputes between the parties shall be determined in England in accordance with the Arbitration Act 1950 and 1979.

Trinity Enhance

CEDAR Audio Limited
20 Home End
Fulbourn
Cambridge
CB21 5BS
United Kingdom

t: +44 1223 881771
e: info@cedaraudio.com
w: www.cedaraudio.com

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